

Vladimir Milošev¹
Dragan Čockalo²
Dubravko Marić³

JEL: L26, L53, M20, M54, O41
DOI: 10.5937/industrija53-57775
UDC: 334.722
Review Paper

Business incubators as part of the development model of entrepreneurial ecosystems: Literature and business practice review

Article history:

Received: 25 March 2025
Sent for revision: 10 August 2025
Received in revised form: 3 September 2025
Accepted: 5 September 2025
Available online: 17 October 2025

Abstract: *Based on empirical evidence and examples of business incubators from different regions, this study provides an overview of the growing importance of business incubators in entrepreneurial ecosystems as a structure for supporting innovation and economic development. Drawing on groundbreaking research, this paper aims to clarify such dynamics while examining their effects on entrepreneurial efforts, proposing a sophisticated analysis of the impact of new technological and organizational trends on the role of business incubators. The study examines business incubators as support systems within entrepre ecosystems, highlighting their evolution, important success factors and emerging trends. A mixed methods approach was used, combining a systematic literature review with comparative analysis of case studies to identify key themes. This research draws on empirical evidence and case studies from different geographical contexts, integrating qualitative and quantitative data from academic literature and practical sources over the last decade. The study identifies strategic management, ecosystem integration and adaptability to technological advances as important factors for incubation success. It reveals that sectoral and corporate incubators are playing an increasingly important role in shaping entrepreneurial ecosystems, it also advances understanding of the evolving role of business incubators and*

¹ University of Novi Sad, Technical faculty "Mihajlo Pupin" Zrenjanin, vladimir.milosev@tfzr.rs

² University of Novi Sad, Technical faculty "Mihajlo Pupin" Zrenjanin

³ College of Sports and Health, Belgrade

their integration into entrepreneurial ecosystems, offering insights for optimizing their impact.

Keywords: *business incubators, model, entrepreneurial infrastructure, technological innovation, entrepreneurial ecosystems.*

Poslovni inkubatori kao deo modela razvoja preduzetničkih ekosistema: Pregled literature i poslovne prakse

Apstrakt: *Na osnovu empirijskih dokaza i primera poslovnih inkubatora iz različitih regiona, ova studija daje pregled rastućeg značaja poslovnih inkubatora u preduzetničkim ekosistemima kao strukture za podršku inovacijama i ekonomskom razvoju. Oslanjajući se na revolucionarna istraživanja, ovaj rad ima za cilj da razjasni takvu dinamiku uz ispitivanje njihovih efekata na preduzetničke napore, predlažući sofisticiranu analizu uticaja novih tehnoloških i organizacionih trendova na ulogu biznis inkubatora. Studija ispituje poslovne inkubatore kao sisteme podrške u okviru preduzetničkih ekosistema, naglašavajući njihovu evoluciju, važne faktore uspeha i trendove u nastajanju. Korišćen je pristup mešovitih metoda, kombinujući sistematski pregled literature sa uporednom analizom studija slučaja da bi se identifikovale ključne teme. Ovo istraživanje se oslanja na empirijske dokaze i studije slučaja iz različitih geografskih konteksta, integrišući kvalitativne i kvantitativne podatke iz akademske literature i praktičnih izvora tokom poslednje decenije. Studija identifikuje strateško upravljanje, integraciju ekosistema i prilagodljivost tehnološkom napretku kao važne faktore za uspeh inkubacije. Otkriva da sektorski i korporativni inkubatori igraju sve važniju ulogu u oblikovanju preduzetničkih ekosistema, takođe unapređuje razumevanje evoluirajuće uloge poslovnih inkubatora i njihove integracije u preduzetničke ekosisteme, nudeći uvid za optimizaciju njihovog uticaja.*

Ključne reči: *poslovni inkubatori, model, preduzetnička infrastruktura, tehnološke inovacije, preduzetnički ekosistemi.*

1. Introduction

Not so long ago, entrepreneurial ecosystems are attracting a lot of attention, starting to emerge as a key topic for researchers, experts and government officials (Autio et al., 2018). To improve understanding of how to support entrepreneurship growth, various studies have examined the interrelationships, characteristics, dynamics, and institutions within these ecosystems (Chen et al., 2019). Stam and Spiegel (2016) proposed a comprehensive model that encompasses functional traits as well as social and physical conditions that

influence human interactions. Nevertheless, it has been noted by numerous researchers that most studies on entrepreneurial ecosystems have largely relied on qualitative case studies, with a notable lack of quantitative analysis.

Further investigations have revealed a deficiency in empirical evidence necessary to evaluate the performance of entrepreneurial ecosystems in contemporary contexts (Chen et al., 2019).

The notion of business incubators originated in the 1950s and has increasingly gained traction globally within the entrepreneurship arena (Mian et al., 2016). A BI is an organization that aids nascent startups by offering a range of services, including office space, management training, and professional support. Recent studies have shifted focus toward technology-oriented BIs, which represent some of the fastest-growing segments in technology-related domains. Notably, six of the top ten billionaire companies recognized by Forbes were established by tech entrepreneurs (Forbes, 2020), including the creators of Microsoft, Facebook, Amazon, and Google. While scholars may have differing opinions on the effects of incubators, they undeniably function as a form of micro-entrepreneurial ecosystem (Theodoraki et al., 2018). BIs exemplifies an optimal segment of the model, operating as a smaller-scale version of an entrepreneurial eco-system that encompasses nearly all its fundamental components, such as entrepreneurs, support services, infrastructure, funding, networks, and collaborative efforts (Malecki, 2017).

Not so long ago, entrepreneurial ecosystems are attracting a lot of attention, starting to emerge as a key topic for researchers, experts and government officials (Autio et al., 2018). Stam and Spiegel (2016) proposed a comprehensive model that encompasses functional traits as well as social and physical conditions that influence human interactions. This model also identifies important elements like entrepreneurial networks, leadership, talent, knowledge, and support services within these ecosystems.

Considering these factors along with prior studies on entrepreneurial ecosystems, this paper seeks to investigate four important elements for assessing performance at the Business Incubator (BI) level. This endeavor aims to improve the framework for cultivating entrepreneurial ecosystems, concentrating on opportunities at the European, re-gional (Western Balkans), national, and local tiers.

2. Concept and previous reviews

Over recent years, the concept of the entrepreneurial ecosystem has emerged as an important theoretical framework for analyzing the fundamental dynamics

related to re-gional entrepreneurship and the prosperity of new ventures (Yuan et al., 2021). According to Yuan (2021), this term, initially developed as an ecological idea, refers to a network of living entities that engage with one another within their environment. Isenberg (2010) presented entrepreneurial ecosystems as dynamic systems that include both social and structural components-individuals, including customers, capital markets, leadership, and culture, that actively collaborate to stimulate entrepreneurial endeavors (Bouncken & Kraus, 2022).

Stam (2015) expands on this idea by characterizing an entrepreneurial ecosystem as a network of interconnected participants and organized components that promote effective entrepreneurship in a specific geographical region. Although various frameworks have been developed to categorize the different actors within entrepreneurial ecosystems, many of these frameworks lack empirical support (Chen et al., 2019). Considering this, Chen (2019) underscores the necessity of positioning research on entrepreneurial ecosystems within local contexts to develop customized models that accurately represent the distinct characteristics, historical context, cultural dimensions, social dynamics, patterns, systems, and governance structures of specific regions (Stam & Van de Wen, 2021).

Cavallo et al. (2019) conducted a comprehensive literature review that delineates multiple definitions of entrepreneurial ecosystems, providing insights intended to improve comprehension for both researchers and practitioners.

Isenberg (2010) outlined the fundamental elements that constitute an entrepreneurial ecosystem, which include: leadership, governmental influence, cultural factors, considerations for success, knowledge resources, financial capital, non-profit entities, industry associations, educational bodies, infrastructure, geographical context, networking opportunities, professionals with a focus on ventures, and prospective customers. In an analysis of 85 research articles, Chen (2019) identified 12 commonly referenced components, many of which correspond with those recognized by Isenberg (2010) and Spiegel (2017) (Fuentes et al., 2024).

An analysis of the literature reveals considerable overlap among the core elements defining business incubators, with shared factors such as culture, government, infrastructure, and leadership.

Systematic literature reviews highlight the significance, structure, and influence of business incubators (BIs) on startups and entrepreneurship. Aernoudt (2004) describes business incubators as supportive environments for nascent ventures during their most vulnerable stages, promoting their survival and growth (Deyanova et al., 2022).

Despite a significant increase in interest from scholars and policymakers, a consensus on the definition of business incubators and the factors contributing to their success remains elusive (Alaassar et al., 2021). The diverse criteria employed to evaluate BI performance complicate the assessment of individual BIs and create challenges for making meaningful comparisons among them (Hausberg & Korreck, 2020). Hackett and Dilts (2004) identified five primary themes related to incubators: studies on incubator development, configuration, impact on incubation, and theoretical explorations of incubator dynamics.

In summary, every incubator serves as a miniature representation of an entrepreneurial ecosystem tailored to its region or nation. Most of the research focuses on pinpointing the important elements that contribute to a successful entrepreneurial ecosystem, utilizing individual incubators as models of business ecosystems.

3. Methodology

3.1. Bibliometric analysis

Bibliometric analysis is a quantitative approach employed to assess and scrutinize scholarly literature, primarily by evaluating publications, citations, and various related metrics. Its primary aim is to identify trends, pinpoint key authors or journals, and monitor the progression of research themes over time. This field utilizes statistical methods to analyze extensive datasets derived from scientific articles, books, conference proceedings, and patents.

According to Broadus (1987), bibliometrics focuses on the quantitative assessment and measurement of numerous published literary collections, or the analytics of these collections, representing both aspects. He also delineates the types of data suitable for bibliometric studies, thereby refining the definition of the term.

Daim et al. (2006) characterize bibliometrics as a supportive tool for research and management, particularly when dealing with large datasets, and as a resource for scientists seeking new insights. Essentially, bibliometric methodologies facilitate large-scale analyses of written studies, as highlighted by Ellegaard and Vallin (2015).

3.2. Initial assumptions and directions of research

When starting research, it is useful to present some initial assumptions and directions of research, so within this research, some of the initial assumptions

can be derived, as well as possible directions of research that can also be some of the research questions.

Initial assumptions: the role of incubators in entrepreneurial ecosystems, the diversity of incubator models, the interdependence of ecosystems, the measurement of the impact of incubators on startups and ecosystems, and global variability (Theodoraki & Messeghem 2017).

Key research directions: incubator models and best practices, measuring the impact of incubators, integration of incubators into entrepreneurial ecosystems, incubator financing and sustainability, incubator support services, startup results and success of startups after incubators, cross-sectoral cooperation, and social and environmental impact (Ahmed et al. 2020).

Research on incubators and entrepreneurial ecosystems can take many forms, from understanding different models of incubators across the region to measuring their impact on both startups and local economies. Cross-sectoral collaboration, the role of funding, mentoring, and the sustainability of incubators are important topics to explore, especially in the context of evolving global markets and local innovation needs.

3.3. Collection and selection of data

It is not necessary to cover all available publications for bibliometric analyses based on large publication datasets, as it is sufficient to use a representative partial sample. Searching in the title ensures that the articles are more related to our scope, which is why this is commonly practiced in bibliometric studies (Kalantari et al. 2017).

To answer the research question, meet the basic objectives, and highlight what has been studied and where there are gaps, different studies, applied methodologies, and thorough and state-of-the-art research have been used and compared. It focused on peer-reviewed articles, reputable journals, and author sources (over 160 literature sources). The collection and review of these sources involved a systematic search in academic databases. A review of the literature and business practices associated with business incubators has provided valuable insights into their effectiveness and impact. The effectiveness of business incubators, their best practices, and their role in broader entrepreneurial ecosystems are explored. The operating models, the support services offered (mentoring, financing, networking), and the strategic approaches used by the incubators were examined. Case studies of successful and unsuccessful incubators were identified and analyzed. Examples in different regions and sectors are found to provide a comprehensive insight. Different incubators were compared to identify best practices, effective

strategies, and factors such as success rates of entrepreneurial ecosystems, service offerings, and stakeholder satisfaction. The main findings from the literature and reviews of business practices are summarized and it is emphasized how incubators affect the success of startups and the development of entrepreneurial ecosystems. Under-researched areas are highlighted, practical recommendations for improving the operation of incubators, policy implications and strategies for better integration into entrepreneurial ecosystems are offered, and guidelines for future research are given.

Overall, the methodology in this paper includes a thorough review of literature and business practices dealing with business incubators and entrepreneurial ecosystems that can be used for further research with the possibility of concretizing proposals for new guidelines for the work of business incubators and the conception of models for the operation of entrepreneurial ecosystems.

4. Literature review and prevailing business practices

4.1. Entrepreneurial ecosystems

Research and literature reviews on entrepreneurial ecosystems cover a wide range of topics related to the interaction of various actors, resources, and factors influencing entrepreneurship based on which Isenberg (2010) argues that leaders and executives are pro-fessionally oriented, focused on people and human potential from educational institutions or infrastructure of entrepreneurial ecosystems, and the geographic positions of entrepreneurial ecosystems are related to or dependent on economic or social infrastructure. Similarly, Spiegel (2017) discussed elements, such as mentors and professional support, related to human potential, educational institutions, and infrastructure. The World Economic Forum (2013) has noted that local and international markets, private equity and financing, mentoring and support systems, robust regulatory frameworks, and leading universities and educational institutions are the most important pillars of entrepreneurial ecosystems (Kansheba and Wald, 2020).

Isenberg (2010), Spiegel (2017), and other studies have missed one important element, and that is technology. Technology is believed to be a very important element of the entrepreneurial ecosystem because technology has been a very important driver of entrepreneurship development in the last few decades. Also, as mentioned earlier, six of the top 10 billionaires on the Forbes list are

tech entrepreneurs (Forbes, 2020), which shows how technology is driving business right now (Chaudhary et al., 2024).

From all the above, a set of basic elements of entrepreneurial ecosystems can be formed, categorizing them as four key components: the people component, the technology component, the capital component, and the infrastructure component.

4.2. Development of key components of entrepreneurial ecosystems

Entrepreneurial ecosystems imply a multi-level network of different participants, resources and mutual connections that interact and support and maintain entrepreneurship within a specific environment. Understanding the dynamics of these ecosystems is important, as they support the enabling environment necessary to support innovative concepts and to advance startups through the core components (Yuan et al., 2021). These elements include:

- Human resources; In the literature so far, it has been shown that the human component is an important capital for the development of entrepreneurship. Vanderstraten and Matthyssens (2012) found that certain services, in-depth operational support for the business, administrative services, and a personal network of contacts could strategically position the incubator in the market. The human potential of high quality and quantity of the entrepreneurial ecosystem have a positive impact on the performance of the entrepreneurial ecosystem (Theodoraki, 2020).
- Innovation and technology; Technological advancement has emerged as an important force driving global entrepreneurial expansion in recent decades (Branstetter et al., 2018). A significant metric for evaluating innovation within an entrepreneurial environment is the amount of funding directed towards research and development. In the realm of technology incubators, the startups that receive backing exemplify ecosystems that prioritize the integration of both informational and biological technologies in their production processes, thus supporting the creation of new enterprises (Branstetter et al., 2018).
- Financial Resources; In economics, finance-capital refers to assets that can improve one's power to operate in the market. It is believed that capital should be an important component of the entrepreneurial ecosystem as previous studies have found that government capital

support has played different roles in supporting and developing incubators (Guan & Jin, 2023).

- Supportive Infrastructure; Infrastructure includes basic physical and organizational structures, e.g. roads, and energy sources, which are necessary for the operation of a company or enterprise; economic infrastructure supports the economic development of the region, for example, roads, railways, highways, water and distribution networks, sewage systems, etc. Social infrastructure supports social services that can improve social comfort and connections such as educational institutions, parks, hospitals, sports venues, etc (Chong et al., 2020).

4.3. Business Incubators

Researching the factors that contribute to the establishment of Development Hatcher-ies (BIs) may reveal their important role in supporting nascent businesses and small organizations during their formative phases. These incubators provide a comprehensive array of services essential for entrepreneurs to develop their ideas and achieve sustainability, including workspaces, mentorship, training, and funding. Additionally, BIs support a supportive ecosystem and networking opportunities for entrepreneurs (Awonuga et al., 2024).

Our initial analysis categorizes the primary types of business incubators into the following groups:

- Specialized Incubators - These incubators offer industry-specific guidance, resources, and programs in return for equity or other compensatory arrangements. This specialization enables them to deliver tailored resources and insights over time (Awonuga et al., 2024).
- Generalist Incubators - Provide resources to startups in multiple industries, providing a broad range of services. They aim to increase a startup's chances by offering mentorship and networking opportunities and looking for ways for firms in their portfolio to optimize their operations and become more visible on the market (Roundy, 2021).
- Corporate Incubators - Established by big business, these incubators try to create their own ecosystems. This way, they can tap into large corporate resources such as important skills and client networks to help make collaboration with other players unique and faster-growing opportunities. They do so by giving them the certainty of being able or forced into a corner (Giglio et al., 2025).
- University Incubators - Often associated with major universities or academic research institutions, these incubators are entrusted with the task of using academic resources, an exceptionally well-endowed research

infrastructure, and high-level technical personnel. According to Hassan (2020), they aim primarily to encourage technology transfer and promote innovation (Hassan, 2020).

- Incubators Sponsored by the Government - Such government backed programs augment the vigor of an ecosystem by providing finance, experience, and nurturing. They are thus significantly beneficial to economic growth and job creation (Bernadus et al., 2024).

4.4. The importance of business incubators for the development of entrepreneurial ecosystems

BIs are one of the important actors of EEs (entrepreneurial ecosystems), especially for nascent startups. BIs usually offer co-working spaces, mentorship opportunities, and access to professional networks. For instance, a startup may collaborate with an incubator to leverage the knowledge of seasoned mentors who offer valuable guidance and assist in establishing relationships with key industry players. BIs play an important role in the growth of startups and the broader entrepreneurial ecosystem, thereby enhancing innovation among the community (Awonuga et al., 2024).

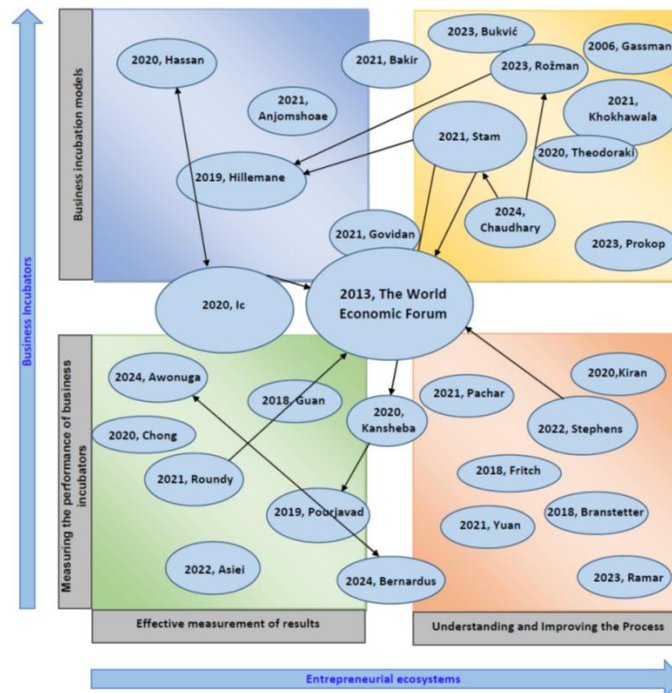
Through business incubators, entrepreneurial enclaves can leverage the resources and support provided despite the obstacles. Moreover, co-working spaces encourage interactions and sharing of thoughts between entrepreneurs with common objectives. This type of support is important in allowing EEs to overcome barriers and increase their likelihood of succeeding (Khokhawala et al., 2021).

For EEs who want to succeed, networking and connectivity are key. For example, EEs can find potential investors, mentors, and industry movers within their networks who can provide valuable help and information. Working with BIs also enables EEs to network with other entrepreneurs who have parallel issues, which encourages collaboration and sharing of experience (Prokop et al., 2023).

To conclude, business incubators are fundamentally working on different levels, including technology advancement, resource facilitation, and practical experience opportunity, among many others, to help entrepreneurs, boost economic growth, and finally improve their products and services sales (Awonuga et al., 2024). A matrix comparison of the main elements of entrepreneurial ecosystems and business incubators provides an in-depth analysis. This study draws upon literature that offers a theoretical foundation for exploring the key elements at play, with practical business reviews demonstrating how such theories inform practices (Figure 1). The combination of theoretical and practical examples creates a better understanding of the

concepts, as it shows the possible complementarity of resources and their optimization (Wadichar et al., 2022). The segmentation between business ecosystems and business incubators is illustrated in Figure 1 through the structured connections and references that signify their relationship towards one another complexly. This relationship matrix design is inspired by a relational template from Ryzhonkov (2013).

Figure 1. Literature and Business Practice Review Matrix



Source: authors

5. Business Incubators and Entrepreneurial Ecosystems in Serbia

5.1. Business Incubators in Serbia

As in the whole world and the countries of the European Union, the idea of business incubation has matured in Serbia and the invaluable importance of forming business incubators has been recognized. At the end of 2006, the

Council for the Development of Small and Medium Enterprises of the Government of the Republic of Serbia adopted the "Program for the Development of Business Incubators and Clusters in the Republic of Serbia 2007 – 2010". It was concluded that the necessity of forming the BIs is urgent for several key reasons, to create new jobs, reduce the number of unsuccessful small and medium-sized enterprises (SME's), strengthen SME's in the region (local development) and retain young people in local communities.

As a first step for the development of BIs, it was the allocation of funds by the state and local governments to finance infrastructure and later continued with the entry of private investments (donors, academic institutions, for-profit organizations, and other economic organizations). With the construction of BIs, the incubator was filled, but with the prior selection of household members with precisely defined criteria for their selection, as well as defined choices for leaving the incubator. Defining the services provided by the Bis (business consulting, entrepreneur training, technological support, financial support) was of particular importance.

To encourage entrepreneurship in Serbia, and to develop business incubators, funds have been provided to municipalities from the National Investment Plan. A total of 17 municipalities applied, namely: Leskovac, Medveđa, Niš, Novi Pazar, Prokuplje, Rakovica, Smederevska Palanka, Bor, Valjevo, Zaječar, Zrenjanin, Kragujevac, Kruševac, Užice, and the Council for the Management of Economic Development Loan Projects of the Government of the Republic of Serbia approved the start of the implementation of business incubator projects for 13 municipalities.

In Serbia, BIs play a key role in supporting startups and supporting entrepreneurial ecosystems. Some of the most important PI and support organizations in Serbia are:

- Business and Technology Incubator of Technical Faculties (BITF); Based in Belgrade, BITF supports technology-oriented startups primarily from technical faculties. Provides opportunities for infrastructure, mentoring, and networking.
- Business Incubator Novi Sad (BINS); is one of the oldest and most prominent incubators in Serbia, located in Novi Sad. It offers a variety of services to startups, including office space, business consulting, and access to funding opportunities.
- Science Technology Park Belgrade (STP Belgrade); It focuses on technology start-ups and innovation-driven businesses. Provides state-of-

the-art infrastructure, access to laboratories, and support for business development.

- StartitCenterr; is present in several cities across Serbia (Belgrade, Novi Sad, Niš, etc.) and serves as a hub for the startup alliance. Offers spaces for the exchange of experiences, events, workshops, and networking opportunities.
- Impact Hub Belgrade; It is an international network with a branch in Belgrade. It provides a space for exchanges of experiences, acceleration programs, and a community of entrepreneurs focused on social impact and sustainable development.
- The Innovation Fund; Although not strictly an incubator, the Innovation Fund of Serbia plays a key role in supporting startups through various financing programs, grants, and investments.
- ICT hub; is another important organization that supports startups in Belgrade. Offers acceleration programs, mentorship, and connections with investors and corporate partners.

These incubators and organizations provide a range of key services for startups, including mentorship, networking opportunities, access to finance, office space, and various support programs aimed at supporting entrepreneurial endeavors in Serbia.

5.2. Entrepreneurial ecosystem in Serbia

The development of the entrepreneurial ecosystem in Serbia has been undertaken since the beginning of the second decade of the twentieth century, and the chronology of origin starts with the establishment of BI. Entrepreneurship in Serbia is understood in relation to its broader environment (spatial, temporal, and social), resulting in the conception of an entrepreneurial ecosystem. It has also been acknowledged that entrepreneurial ecosystems are a novel way of contextualizing ever more complex and interdependent social systems.

The entrepreneurial ecosystem of Serbia is undergoing significant progress in recent years with the emergence of startups and other parameters scaling of entrepreneurship initiatives throughout the country. The umbrella of the business ecosystem of Serbia includes:

- Business incubators; BIs, like the Business Technology Incubator of Technical Faculties (BITF) in Belgrade and Business Incubator Novi

Sad (BINS) in Novi Sad, as mentioned above, facilitate technology-oriented startups through infrastructure, mentoring, and support.

- Startup squads and workspaces; Startit Centri in Belgrade, Novi Sad, Niš, and many other cities provide co-working space in addition to organizing events, workshops, and other activities aimed at entrepreneurs.
- Accelerators – e.g., ICT Hub etc. – speed up startups' development through intensive training, mentorship, and link programs with investors.
- Science and Technology Parks; like Science Technology Park Belgrade (STP Belgrade), offer high-tech infrastructure and laboratory access throughout the entire business development stages and aid innovative start-ups.
- Educational institutions – Technical faculties and universities in Serbia are important for developing entrepreneurial skills and supporting young entrepreneurs through educational programs and research centers.
- One of the main sources of funding; financial assistance, the Innovation Fund, provides financial support to technology and innovative enterprises in the form of grants.
- Regulatory environment and support; Betterment of the regulatory environment and government and local community support to entrepreneurs perform an important function in the realization of entrepreneurial ecosystem growth.
- Internationally connected; global organizations such as Impact Hub, which has a branch in Belgrade as part of its worldwide network, aid startups oriented towards creating social impacts and contributing to sustainable development on both local and global scales.
- Investment funds and angel investors; besides the support funds, there is also an increasing number of private investment funds and angel investors who are keen to fund the growth of Serbian startups, in exchange for capital, mentorship, and a pool of contacts.
- Corporate Engagement; Corporate accelerators, funds, or partnerships; major companies in Serbia are beginning to understand that they can help grow domestic startup ecosystems and, consequently, have been proactive in providing access to resources and markets.
- Women entrepreneurship; many programs and organizational initiatives are dedicated to empowering women entrepreneurship

through enabling mentorships, training, and support for women to join the economy.

- Regional initiative and integration; Serbia is an active participant in regional initiatives like the Balkan Venture Forum and other platforms that allow startups to be connected with investors and partners from the region.

These factors together contribute to an energetic entrepreneurial environment in Serbia by promoting innovation, technological support, and economic growth through the support of both new and existing entrepreneurs.

6. Discussion

However, business incubators are an important component of the model of entrepreneurship ecosystem development, the ways and the ways that fill up and develop various entrepreneurial ecosystems (Milošev et al., 2024).

Early stage rehearsal, support, and validation: Business incubators support startups very early when they are at their most vulnerable. They provide: Infrastructure; physical spaces, office amenities, and sometimes specialized tools or laboratories, resources; availability of legal, accounting, and administrative assistance, Validation; Business model tweaks, market assumption verification, and minimum viable products.

Therefore, incubators introduce a network and mentors that cultivate an environment for: Mentors; Seasoned entrepreneurs and industry experts who can offer invaluable guidance, share networks, and offer strategic advice, Also, peer support is the biggest advantage of a startup incubator.

Funding opportunities: The incubator is one of the key roles to facilitate access to the financing. Seed Financing; Some offer funding through grants or investment readiness pro-grams, Links to investors; They usually have connections to angels, VCs, and other funding sources, which are essential for startups to develop.

Skills development and capacity building; the ability to learn: Entrepreneurial ecosystems thrive on skilled talent and continuous learning. Educational programs: incubators provide workshops, seminars, and accelerator programs to improve entrepreneurial skills and business acumen. Technical expertise; some (like Spring Works or Intermerd Tech) focus on either providing technical

training or bridging these with access to specialist knowledge in sectors such as technology or biotechnology.

Cultural and regulatory levels of support: Successful ecosystems develop an entrepreneurial culture and argue for supportive policies: culture shift; Incubators help to shift the mindset around risk-taking, innovation, and entrepreneurship as a viable career path, policy advocacy to influence regulatory environment; They can work with policy-makers to advocate for regulatory reforms that support startups, such as simplified business registration or tax incentives.

Collaboration: Universities and Research Centres: expertise transfer; Incubators create a bridge between academia and industry, promoting research commercialization and innovation, Supporting Student Startups; They encourage graduates and researchers to start their own businesses.

The economic and social context the following effective business incubators: Startup Network; These startups develop networks that can develop into economic entities, economic development; They attract investment, promote innovation, and diversify industries, stimulating local economies, social benefits; These incubators prioritize social impact startups and work on solving social problems through innovative solutions.

The previous discussion raises some questions that can be researched and can provide certain answers that can define new practical models:

- Lessons from both sides: What unique features global business incubators to adopt?
- Impact on local economy: What do good entrepreneurial ecosystems and successful incubators mean for the local economy? What are examples of this from other regions or countries?
- Sector-focused: What are the advantages of sector-specific incubators (e.g., technology, social impact), when it comes to nurturing specialized startups?
- Challenges and Opportunities: What are the primary challenges faced by entrepreneurs and incubators in developing countries versus those in developed nations? How can these issues be mitigated?
- Kill two birds with one stone: How to measure the impacts of business incubators on business ecosystems and how to improve this measure?
- Future trends: How incubators and ecosystems can adjust to provide support in sectors like artificial intelligence, sustainable

technologies, cryptocurrency transactions, as well as adapting to challenges brought by digital transformation and globalization?

The interaction of business incubators and entrepreneurial ecosystems is important to ensuring that we drive innovation, economic resilience, and social progress is a key concern policymakers, investors, educators, and entrepreneurs themselves have (Milošev et al., 2024).

7. Conclusions

Business incubators are essential elements of the entrepreneurial ecosystem development model and perform multiple functions in support of startups and innovation.

BIs are an important support system for startups, offering them the resources, infrastructure, and mentorship necessary to successfully navigate the early stages of growth. Such support reduces risk and improves survival and growth rates. Incubators also help founders improve their entrepreneurial skills and business knowledge through training programs, workshops, and accelerator initiatives. It creates a culture of innovation, enabling startups to test concepts and ensure they can scale their operations before investing heavily in other areas. Incubators help create a thriving business ecosystem. They support policy changes that encourage enterprises to thrive, streamline compliance, and drive entrepreneurship as a career option. Most importantly, successful startups backed by incubators result in job creation, economic growth, and sectoral diversification.

Business incubators are the most important key players within each layer of the entrepreneurship ecosystem and are the fundamental component of each entrepreneurship ecosystem. They somehow acknowledge a positive attitude in promoting creativity, involving participants, and supporting policies, all indispensably part of nurturing a landscape conducive to upcoming innovators. Continued progress through investment into incubators and smart integration into wider ecosystem development models will be essential to help grow and build resilient economies and entrepreneurship for long-term development.

A few limitations should be noted while assessing the outcomes of the study. The literature review is mainly based on available academic, research, and industry papers and therefore has a bias towards the sources available, with different sectors and regions concerned having variable data collection quality and availability. Second, the models of business incubators and business ecosystems presented in the existing literature are often very context-specific at the local level, making it challenging to generalize the insights. Future

research may benefit from more comparative analyses and quantitative data to con-firm or disprove these theses.

These implications apply to Serbia in particular, given the national-level challenges and potentials at play. Serbia first must diversify its economy and support innovation. In the context of rethinking entrepreneurship, business incubators offer a means to fast-track this development, offering startups and small businesses services, access to infrastructure, guides, and connections to their funding networks. It will result in better and more successful entrepreneurship, as well as new, successful job creation. Second, the matrix between key actors, such as universities, research institutes, the private sector, and the government, is still weak so far in the Serbian setting and needs strengthening to address an existing gap in the entrepreneurship ecosystem. Third, the implications for policy are that there is a need for establishing an environment conducive to the operation of business incubators. This should be through appropriate legislation and financial incentives as well as strategies that acknowledge the role of incubators in the development of a national economy. Fourth, at the educational level, the launching of entrepreneurial programs and cooperation with business incubators will enable young people and students to sail into entrepreneurial waters. In the end, applying the knowledge from analyses of literature and practice of business, Serbia can develop the global patterns according to its own capital and potentials. This would help to create a viable entrepreneurial ecosystem, enabling innovation, economic growth, and social prosperity.

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